博旭新能源
Boomtec

BOOMTEC INDUSTRY

Recovering Energy. Powering Industry.

Plant-wide energy recovery solutions for waste heat, pressure energy, cold energy and online diagnostics.

Engineered turbine, ORC and compressor systems for complex industrial operating conditions.

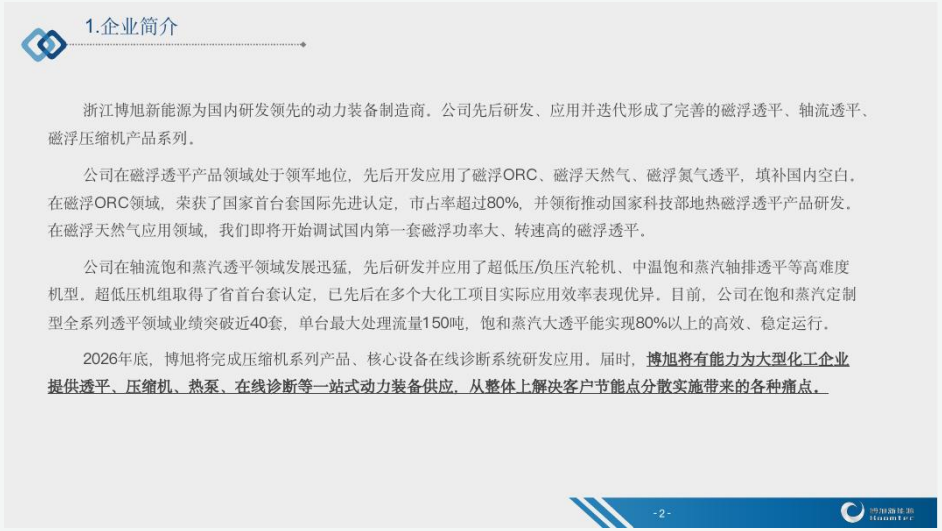
国内网站: http://www.boomtec.com
国际网站: http://www.boom-turbine.com

Zhejiang Boomtec New Energy Technology Co., Ltd.

Company Profile 2026 | International Edition

Company Overview

- Boomtec Industry is a China-based developer and manufacturer of industrial power equipment.
- Core platforms include magnetic-bearing turbines, axial turbines and magnetic-bearing compressors.
- Our engineering focus is the recovery of energy from low-pressure steam, low-grade heat, pressure letdown and challenging process media.
- Boomtec is building an integrated capability spanning turbines, compressors, heat pumps and online diagnostics.



1.企业简介

浙江博旭新能源为国内研发领先的动力装备制造商。公司先后研发、应用并迭代形成了完善的磁浮透平、轴流透平、磁浮压缩机产品系列。

公司在磁浮透平产品领域处于领军地位，先后开发应用了磁浮ORC、磁浮天然气、磁浮氮气透平，填补国内空白。在磁浮ORC领域，荣获了国家首台套国际先进认定，市占率超过80%，并领衔推动国家科技部地热磁浮透平产品研发。在磁浮天然气应用领域，我们即将开始调试国内第一套磁浮功率大、转速高的磁浮透平。

公司在轴流饱和蒸汽透平领域发展迅猛，先后研发并应用了超低压/负压汽轮机、中温饱和蒸汽轴排透平等高难度机型。超低压机组取得了省首台套认定，已先后在多个大化工项目实际应用效率表现优异。目前，公司在饱和蒸汽定制型全系列透平领域业绩突破近40套，单台最大处理流量150吨，饱和蒸汽大透平能实现80%以上的高效、稳定运行。

2026年底，博旭将完成压缩机系列产品、核心设备在线诊断系统研发应用。届时，**博旭将有能力为大型化工企业提供透平、压缩机、热泵、在线诊断等一站式动力装备供应，从整体上解决客户节能点分散实施带来的各种痛点。**

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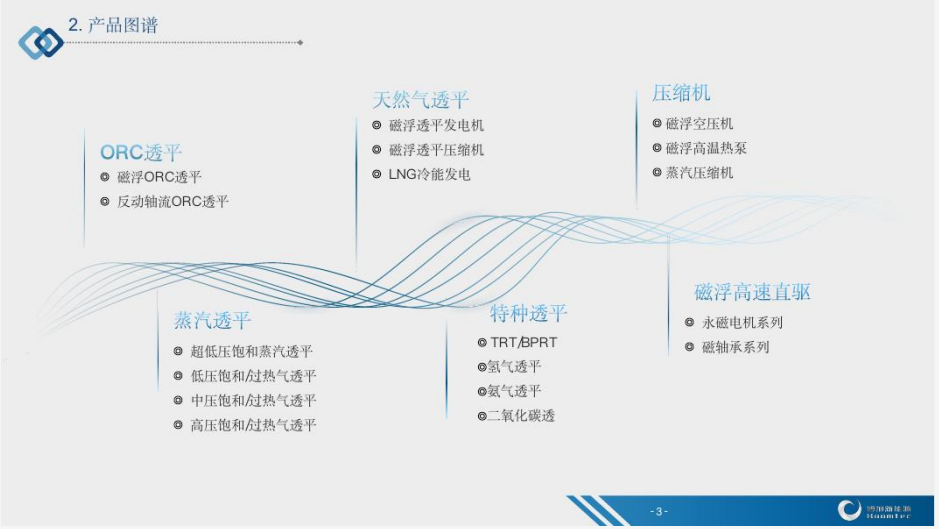
ORIGINAL TECHNICAL REFERENCE VISUAL

All performance claims and project references are subject to project-specific verification and approval.

Product Portfolio

- Magnetic-bearing ORC turbine generators
- Reaction axial ORC turbine generators
- Ultra-low-pressure and saturated-steam turbines
- Medium- and high-pressure steam turbines
- Magnetic-bearing gas turbines and compressors
- LNG cold-energy, hydrogen, ammonia and CO2 expansion technologies
- Magnetic-bearing air compressors, high-temperature heat pumps and steam compressors



ORIGINAL TECHNICAL REFERENCE VISUAL

Plant-Wide Energy Integration

- Diagnose waste-heat, pressure-letdown and cooling-demand points across process and utility systems.
- Develop an integrated energy-station concept that accounts for operating fluctuations and future expansion.
- Select compression, heat-pump or turbine-driving routes according to actual process parameters.
- Coordinate multiple recovery units instead of implementing isolated modifications.

ORIGINAL TECHNICAL REFERENCE VISUAL

Featured capabilities include negative-pressure flash-steam expansion, water-erosion-resistant blade design and multi-unit dispatch.

Research and Development

- Sustained high-intensity investment in power-equipment research and product industrialization.
- R&D programs cover magnetic-bearing ORC, negative-pressure steam turbines, geothermal power, ammonia turbines, hydrogen turbines and wave energy.
- Recognized through national and provincial first-of-a-kind equipment programs and technology projects.

ORIGINAL TECHNICAL REFERENCE VISUAL

Specific patent counts and award wording should be confirmed before external quotation.

Technology Assurance

- 91°C negative-pressure steam-turbine engineering experience.
- National R&D participation in geothermal magnetic-bearing ORC technology.
- Development programs for ammonia turbines, high-speed magnetic-bearing natural-gas turbines and wave-energy turbines.
- R&D personnel represent more than 30% of the team; annual R&D investment exceeds 10% according to company materials.

ORIGINAL TECHNICAL REFERENCE VISUAL

Engineering data is reviewed for each customer application.

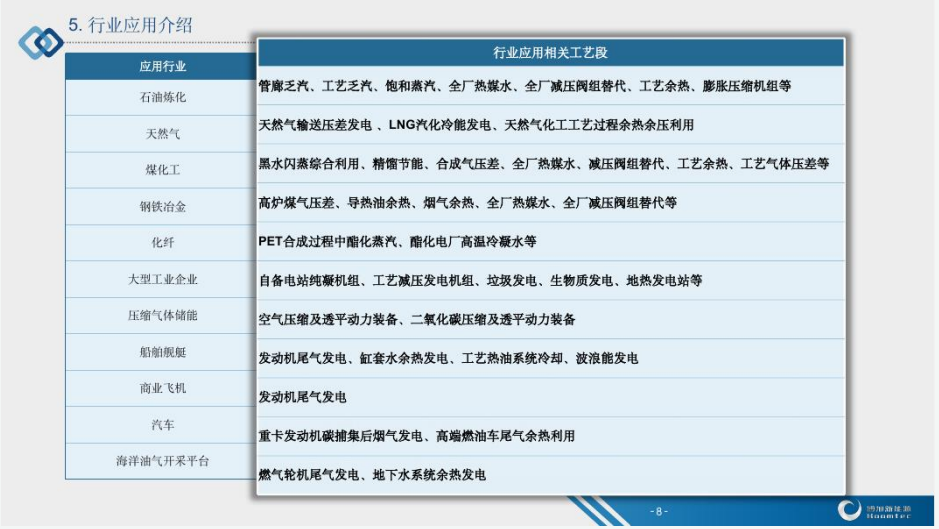
Manufacturing and Delivery System

- Dedicated assembly capability for magnetic-bearing and heavy-duty turbines.
- Engineering technology center supported by machining, testing and digital-management systems.
- Industry-university-research collaboration supports product development and validation.
- Customized design, assembly and project delivery for application-specific operating conditions.

ORIGINAL TECHNICAL REFERENCE VISUAL

Industry Applications

- Refining and petrochemicals: steam networks, pressure-letdown replacement, process heat and condensate.
- Natural gas and LNG: transmission pressure recovery, cold-energy generation and process energy recovery.
- Coal chemicals and fertilizer: flash steam, synthesis gas pressure, urea hot water and process waste heat.
- Metals, fiber and large industrial sites: hot water, esterification steam, flue gas and captive-power optimization.
- Emerging applications include compressed-energy storage, marine energy and special-gas expansion.



ORIGINAL TECHNICAL REFERENCE VISUAL

Products and Reference Applications

- The following pages summarize representative technology platforms and application references.
- Project names and performance figures should be released externally only after internal and customer approval.

ORIGINAL TECHNICAL REFERENCE VISUAL

Saturated-Steam Turbine Series

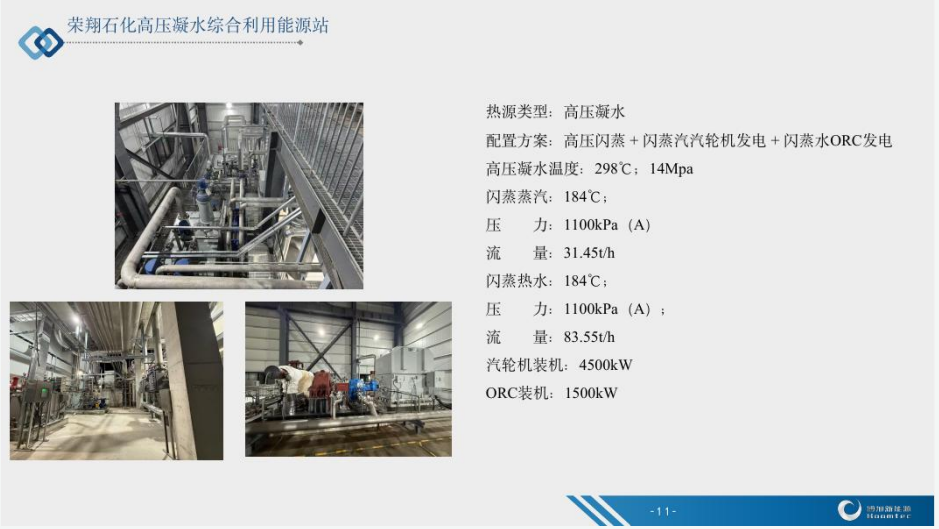
- Single-unit power coverage up to 20 MW.
- Saturated-steam flow handling up to 150 t/h.
- Axial-exhaust configurations available.
- Experience with wet steam, variable conditions and water-erosion protection.
- Application-specific aerodynamic and mechanical design.

ORIGINAL TECHNICAL REFERENCE VISUAL

Reference applications include utility steam, PTA process steam, DMO process steam and flash steam.

Integrated High-Pressure Condensate Recovery

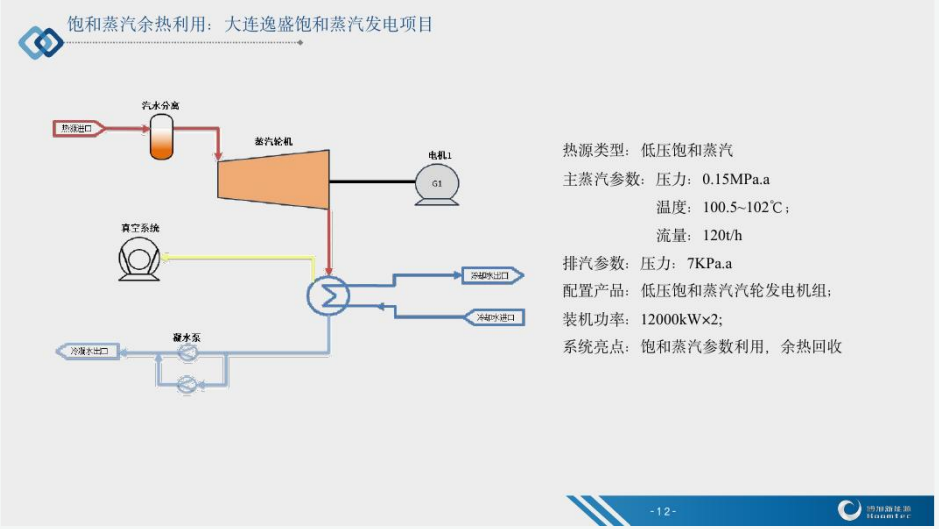
- Heat source: high-pressure condensate at 298°C and 14 MPa.
- Configuration: high-pressure flash + flash-steam turbine generation + flash-water ORC generation.
- Flash steam: 184°C, 1,100 kPa(A), 31.45 t/h.
- Flash water: 184°C, 1,100 kPa(A), 83.55 t/h.
- Installed capacity: 4,500 kW steam turbine + 1,500 kW ORC.



ORIGINAL TECHNICAL REFERENCE VISUAL

Low-Pressure Saturated-Steam Generation

- Heat source: low-pressure saturated steam.
- Inlet: 0.15 MPa(A), 100.5-102°C, 120 t/h.
- Exhaust pressure: 7 kPa(A).
- Equipment: low-pressure saturated-steam turbine-generator set.
- Installed capacity: 12,000 kW x 2.



ORIGINAL TECHNICAL REFERENCE VISUAL

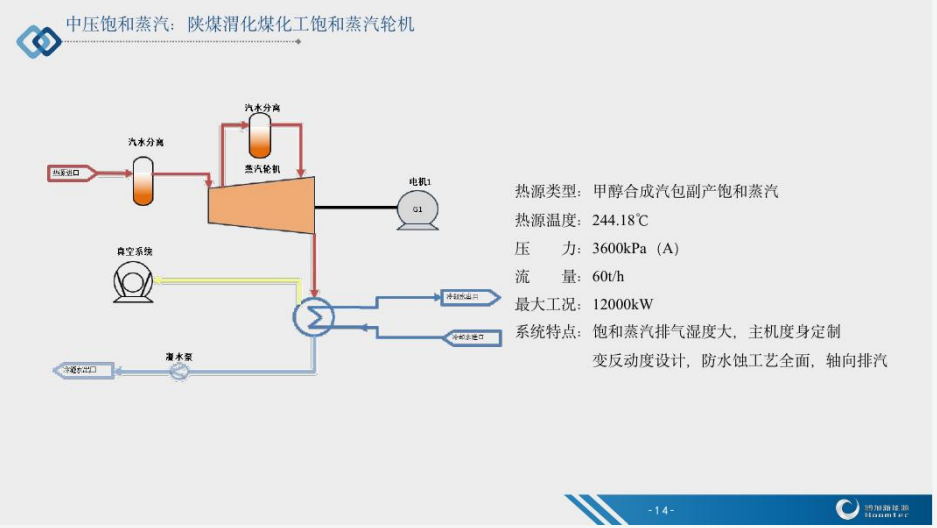
Ultra-Low-Pressure Steam Recovery

- Heat source: flash steam from a low-pressure steam network.
- Inlet: 0.10-0.12 MPa(A), 100.5-102°C, 33 t/h.
- Exhaust pressure: 8 kPa(A).
- Equipment: ultra-low-parameter saturated-steam turbine generator.
- Installed capacity: 2,500 kW.

ORIGINAL TECHNICAL REFERENCE VISUAL

Medium-Pressure Saturated-Steam Turbine

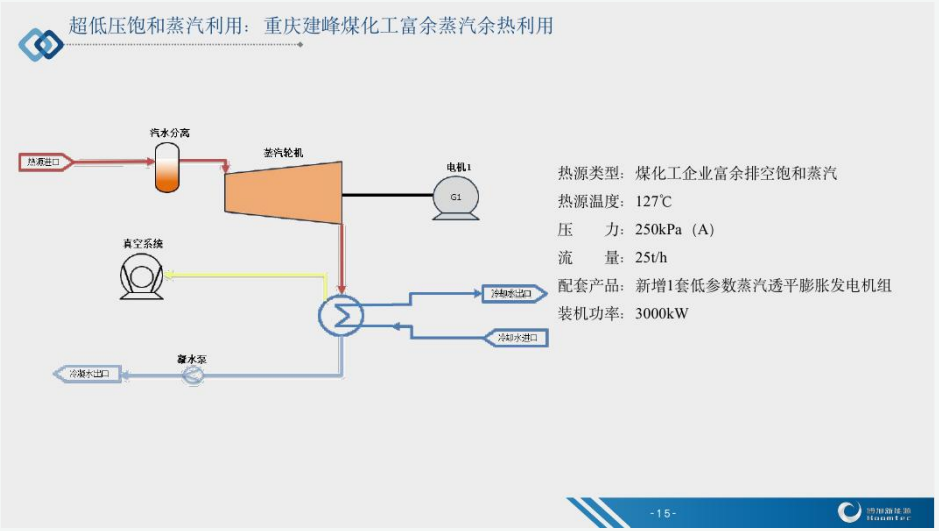
- Heat source: by-product saturated steam from methanol synthesis.
- Inlet: 244.18°C, 3,600 kPa(A), 60 t/h.
- Maximum operating output: 12,000 kW.
- Customized for high exhaust moisture with variable-reaction design, water-erosion protection and axial exhaust.



ORIGINAL TECHNICAL REFERENCE VISUAL

Surplus Saturated-Steam Recovery

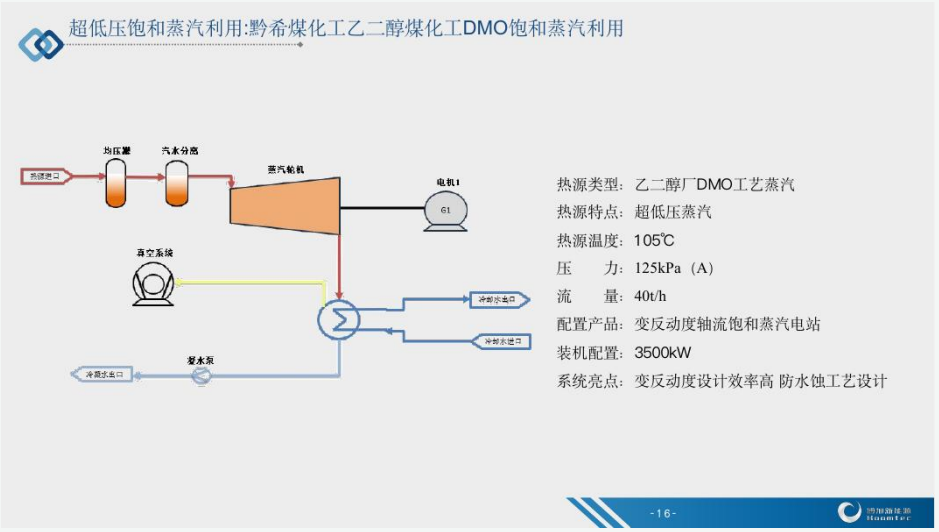
- Application: recovery of vented surplus saturated steam in a coal-chemical plant.
- Heat source: 127°C, 250 kPa(A), 25 t/h.
- Equipment: low-parameter steam-turbine expansion generator.
- Installed capacity: 3,000 kW.



ORIGINAL TECHNICAL REFERENCE VISUAL

DMO Process Steam Recovery

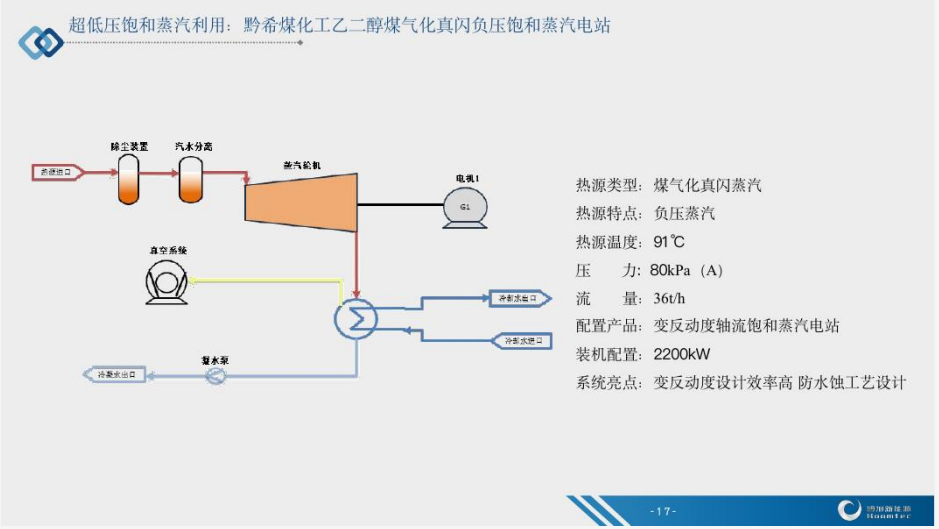
- Heat source: ultra-low-pressure DMO process steam from an ethylene-glycol plant.
- Inlet: 105°C, 125 kPa(A), 40 t/h.
- Equipment: variable-reaction axial saturated-steam power unit.
- Installed capacity: 3,500 kW.
- Design focus: efficiency under variable conditions and water-erosion resistance.



ORIGINAL TECHNICAL REFERENCE VISUAL

91°C Negative-Pressure Steam Recovery

- Heat source: negative-pressure flash steam from coal gasification.
- Inlet: 91°C, 80 kPa(A), 36 t/h.
- Equipment: variable-reaction axial saturated-steam power unit.
- Installed capacity: 2,200 kW.
- Design focus: efficient expansion of low-temperature wet steam and water-erosion protection.



ORIGINAL TECHNICAL REFERENCE VISUAL

ORC Turbine Series

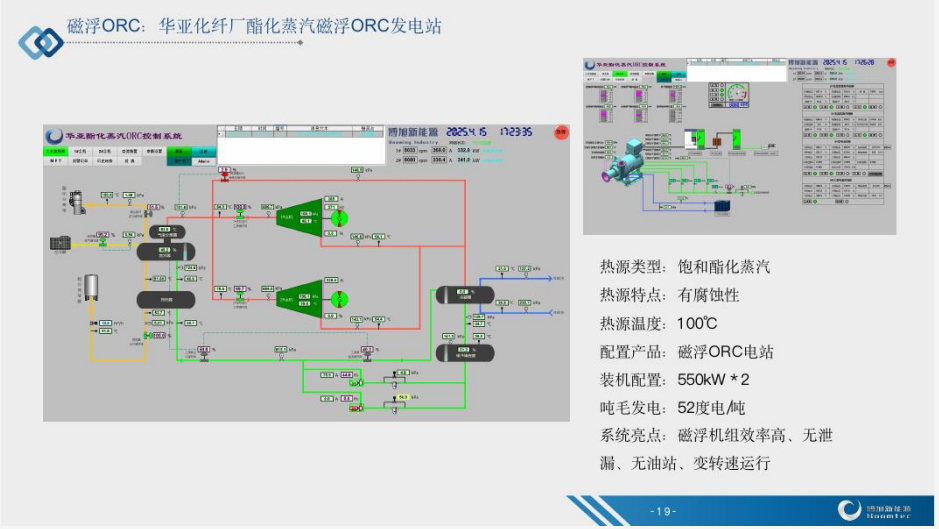
- Magnetic-bearing ORC: 300-2,000 kW single-unit coverage.
- Reaction axial ORC: 2-10 MW single-unit coverage.
- Designed for low-grade industrial heat, hot water, geothermal resources and difficult process media.
- Magnetic-bearing units offer oil-free, variable-speed operation; axial units support larger and stable heat sources.

ORIGINAL TECHNICAL REFERENCE VISUAL

Market-share claims are intentionally omitted pending a unified approved external-data register.

PET Esterification-Steam ORC

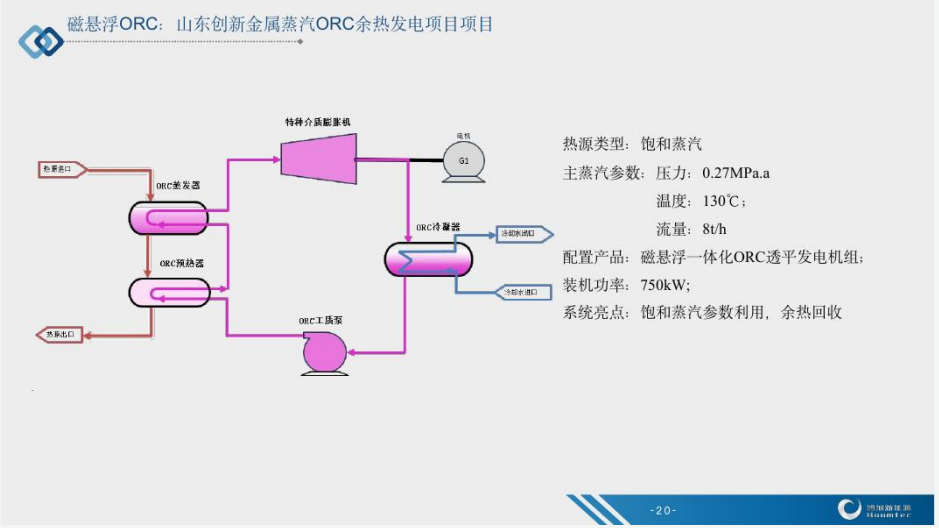
- Heat source: saturated esterification steam with corrosive characteristics.
- Heat-source temperature: 100°C.
- Equipment: magnetic-bearing ORC power station.
- Installed capacity: 550 kW x 2.
- Reported generation: 52 kWh per tonne of product.
- Highlights: high efficiency, oil-free system, variable-speed operation and minimized leakage risk.



ORIGINAL TECHNICAL REFERENCE VISUAL

Saturated-Steam ORC Recovery

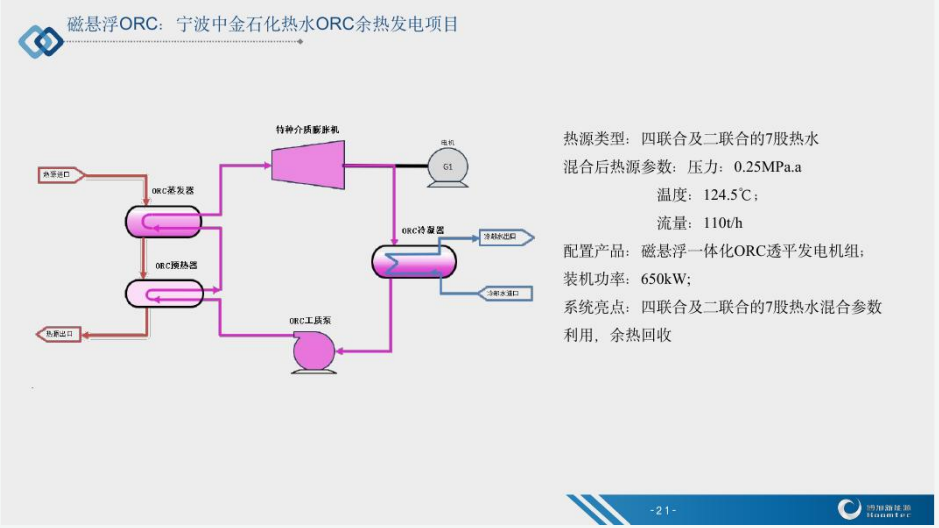
- Heat source: saturated steam at 0.27 MPa(A), 130°C and 8 t/h.
- Equipment: integrated magnetic-bearing ORC turbine-generator set.
- Installed capacity: 750 kW.
- Objective: recover usable energy from saturated-steam conditions.



ORIGINAL TECHNICAL REFERENCE VISUAL

Multi-Source Hot-Water ORC

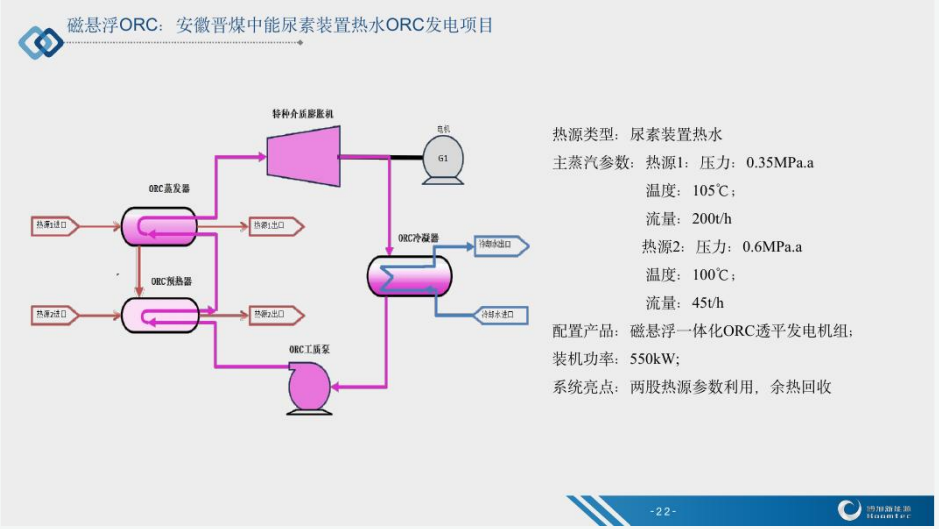
- Heat source: seven hot-water streams combined from two process units.
- Combined source: 0.25 MPa(A), 124.5°C, 110 t/h.
- Equipment: integrated magnetic-bearing ORC turbine-generator set.
- Installed capacity: 650 kW.



ORIGINAL TECHNICAL REFERENCE VISUAL

Urea-Plant Hot-Water ORC

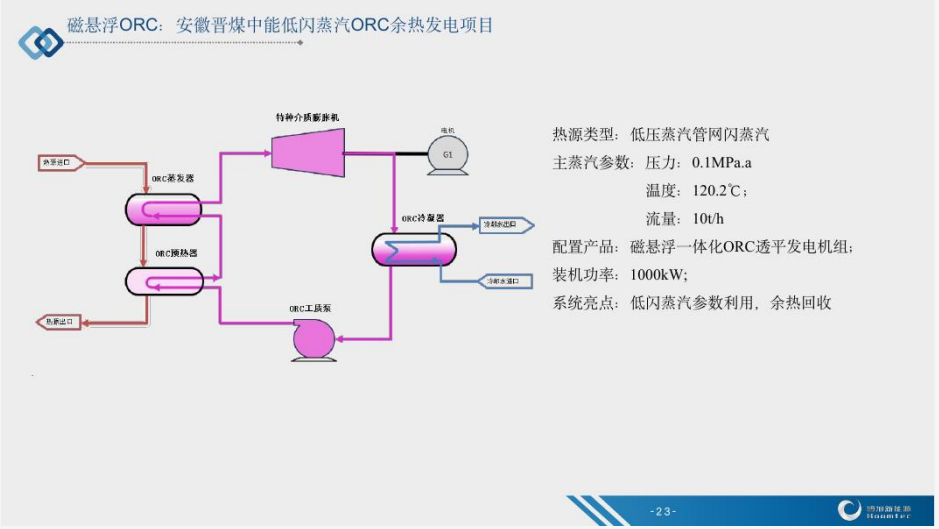
- Heat source 1: 105°C, 0.35 MPa(A), 200 t/h.
- Heat source 2: 100°C, 0.60 MPa(A), 45 t/h.
- Equipment: integrated magnetic-bearing ORC turbine-generator set.
- Installed capacity: 550 kW.
- Engineering focus: combined recovery from two heat-source streams.



ORIGINAL TECHNICAL REFERENCE VISUAL

Low-Flash-Steam ORC

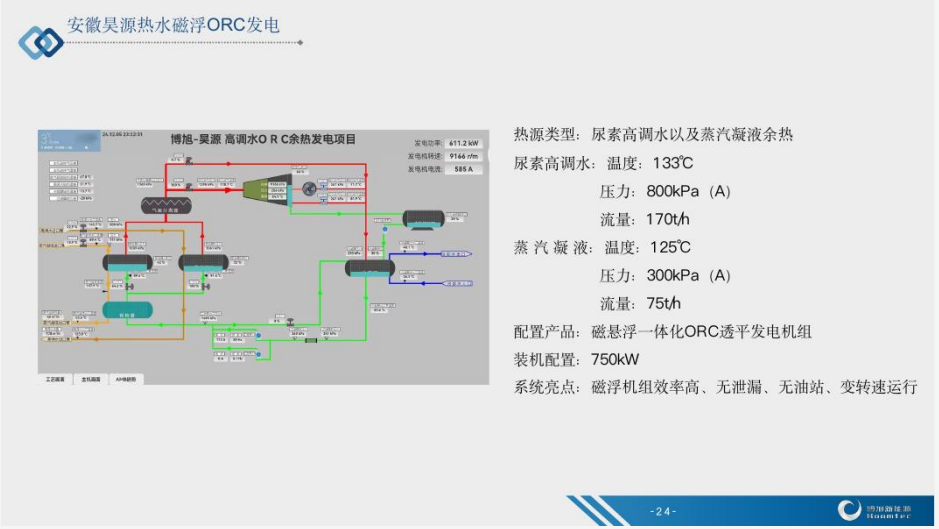
- Heat source: low-pressure-network flash steam.
- Inlet: 0.10 MPa(A), 120.2°C, 10 t/h.
- Equipment: integrated magnetic-bearing ORC turbine-generator set.
- Installed capacity: 1,000 kW.



ORIGINAL TECHNICAL REFERENCE VISUAL

Urea Hot Water and Condensate ORC

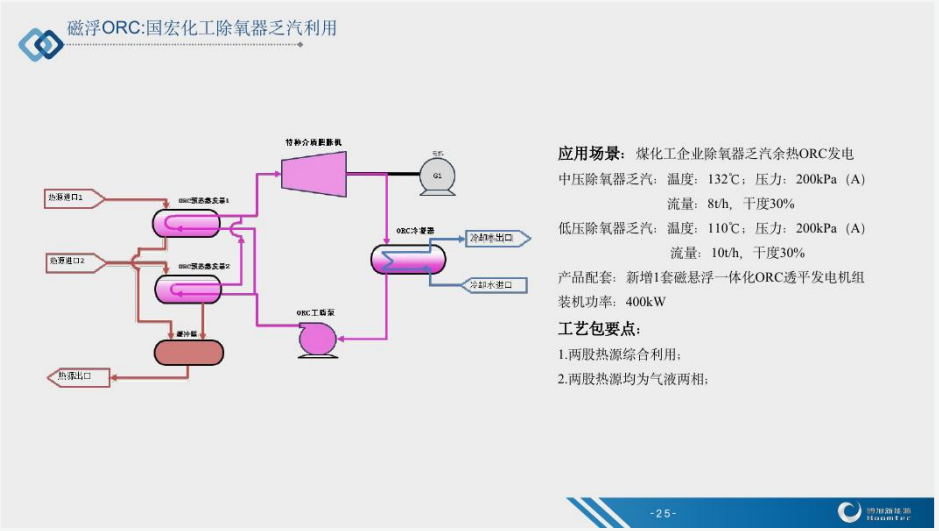
- Urea hot water: 133°C, 800 kPa(A), 170 t/h.
- Steam condensate: 125°C, 300 kPa(A), 75 t/h.
- Equipment: integrated magnetic-bearing ORC turbine-generator set.
- Installed capacity: 750 kW.
- Highlights: oil-free magnetic-bearing system, variable-speed operation and minimized leakage risk.



ORIGINAL TECHNICAL REFERENCE VISUAL

Deaerator Exhaust-Steam ORC

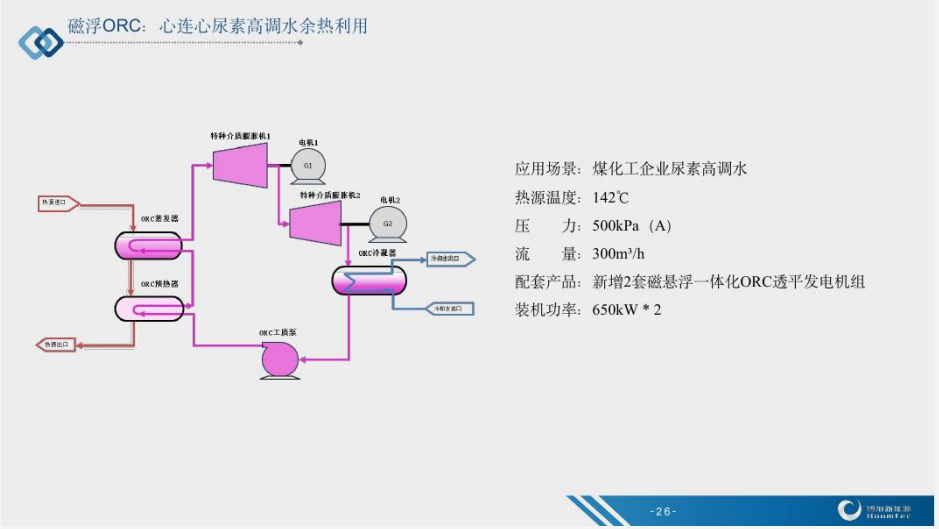
- Medium-pressure exhaust: 132°C, 200 kPa(A), 8 t/h, approximately 30% dryness.
- Low-pressure exhaust: 110°C, 200 kPa(A), 10 t/h, approximately 30% dryness.
- Equipment: integrated magnetic-bearing ORC turbine-generator set.
- Installed capacity: 400 kW.
- Engineering focus: combined recovery from two two-phase heat sources.



ORIGINAL TECHNICAL REFERENCE VISUAL

Urea Hot-Water Waste-Heat Recovery

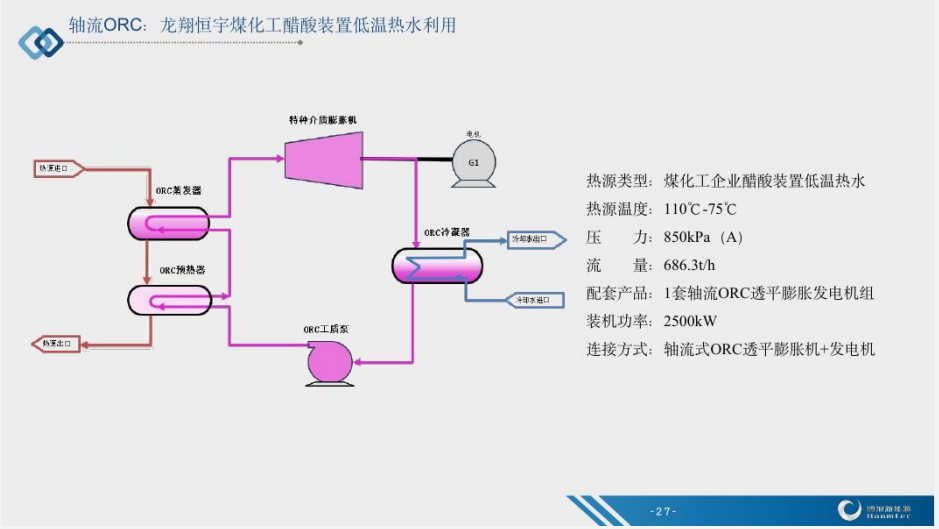
- Application: urea-plant hot-water energy recovery.
- Heat source: 142°C, 500 kPa(A), 300 m³/h.
- Equipment: two integrated magnetic-bearing ORC turbine-generator sets.
- Installed capacity: 650 kW x 2.



ORIGINAL TECHNICAL REFERENCE VISUAL

Large-Flow Low-Temperature Hot-Water ORC

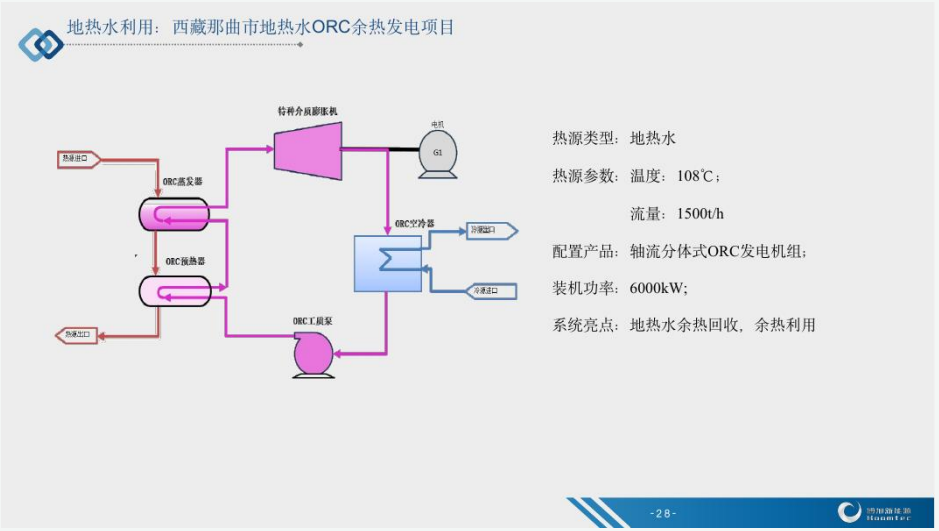
- Heat source: low-temperature hot water from an acetic-acid unit.
- Temperature range: 110°C to 75°C.
- Pressure: 850 kPa(A); flow: 686.3 t/h.
- Equipment: reaction axial ORC turbine expansion generator.
- Installed capacity: 2,500 kW.



ORIGINAL TECHNICAL REFERENCE VISUAL

Geothermal-Water ORC

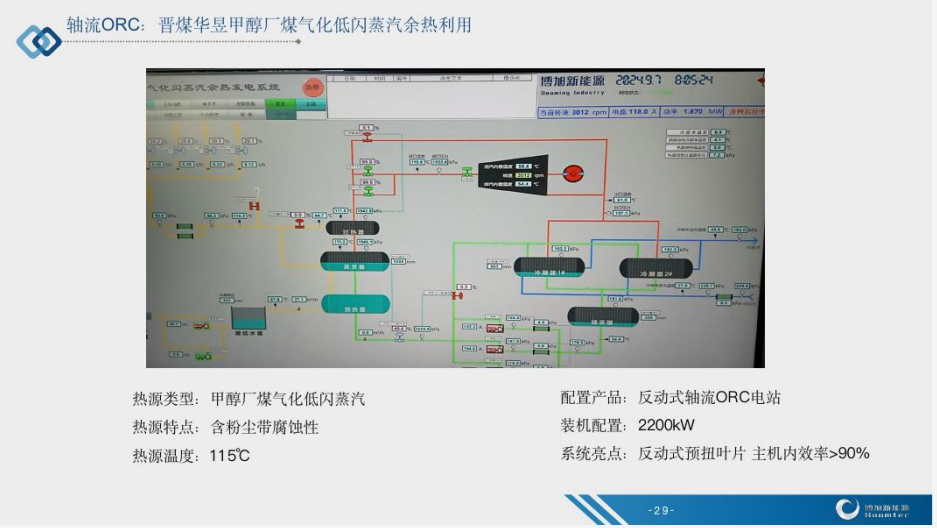
- Heat source: geothermal water.
- Source conditions: 108°C and 1,500 t/h.
- Equipment: split-type axial ORC generator set.
- Installed capacity: 6,000 kW.
- Objective: recover low-grade geothermal heat for power generation.



ORIGINAL TECHNICAL REFERENCE VISUAL

Corrosive Low-Flash-Steam ORC

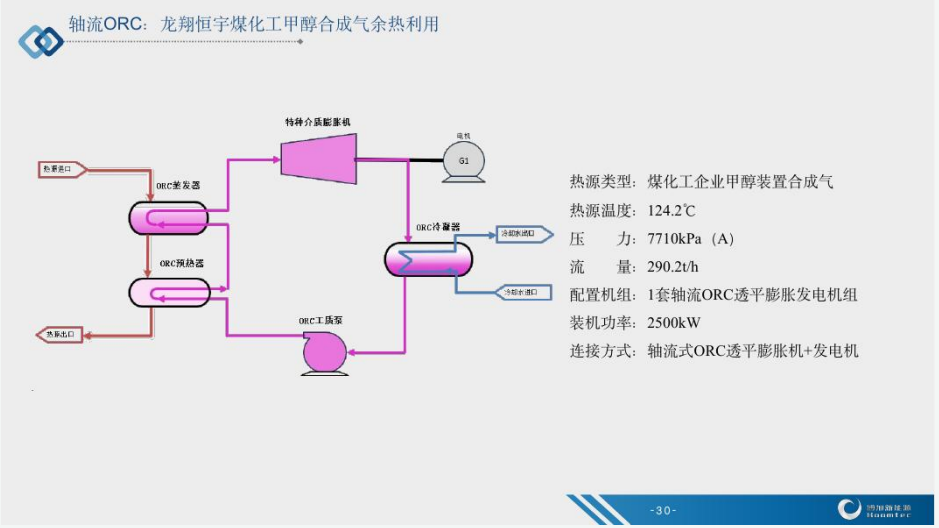
- Heat source: low-flash steam from coal gasification in a methanol plant.
- Characteristics: dusty and corrosive process medium.
- Heat-source temperature: 115°C.
- Equipment: reaction axial ORC power station.
- Installed capacity: 2,200 kW.
- Reported turbine internal efficiency: above 90% under the referenced design.



ORIGINAL TECHNICAL REFERENCE VISUAL

Methanol Synthesis-Gas Waste-Heat ORC

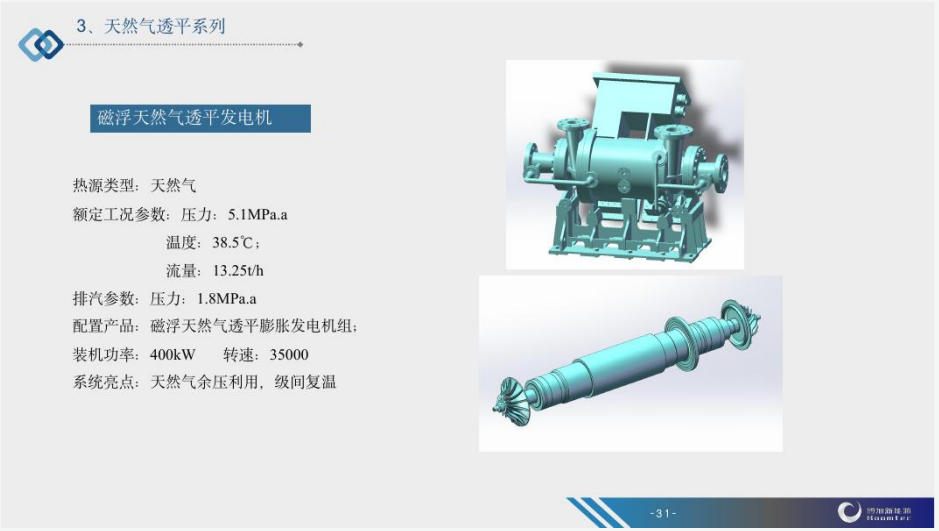
- Heat source: synthesis gas from a methanol unit.
- Conditions: 124.2°C, 7,710 kPa(A), 290.2 t/h.
- Equipment: axial ORC turbine expansion generator.
- Installed capacity: 2,500 kW.



ORIGINAL TECHNICAL REFERENCE VISUAL

Magnetic-Bearing Natural-Gas Turbine

- Rated inlet: natural gas at 5.1 MPa(A), 38.5°C and 13.25 t/h.
- Exhaust pressure: 1.8 MPa(A).
- Equipment: magnetic-bearing natural-gas turbine expansion generator.
- Installed capacity: 400 kW; rated speed: 35,000 rpm.
- Application: pressure-energy recovery with interstage reheating.



ORIGINAL TECHNICAL REFERENCE VISUAL

Special-Purpose Turbines

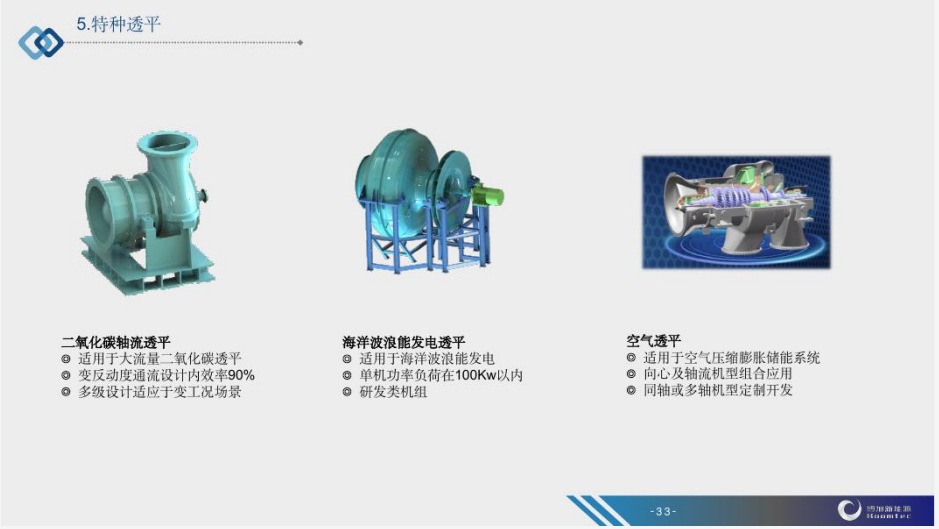
- Integrated magnetic-bearing ethylene turbine-compressor for process-gas expansion and compression.
- High-pressure ammonia radial-turbine generator with single- or multi-stage configuration.
- High-speed hydrogen radial turbine for hydrogen-rich synthesis gas.
- Core magnetic bearings, generators and turbine stages are developed as an integrated system.

ORIGINAL TECHNICAL REFERENCE VISUAL

These technologies are strategic development products; confirm export readiness before active sales.

CO2, Air and Wave-Energy Turbines

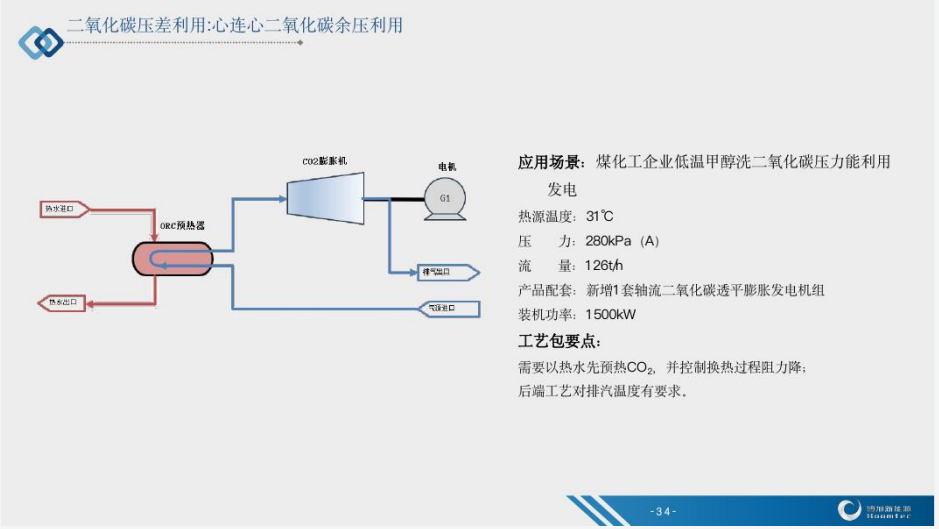
- Axial CO2 turbine for large-flow pressure-energy recovery and variable operating conditions.
- Air turbines for compressed-air energy-storage systems using radial and axial configurations.
- Low-pressure oscillating-water-column turbine technology for wave-energy generation.
- Customized single-shaft and multi-shaft arrangements are available for engineering development.



ORIGINAL TECHNICAL REFERENCE VISUAL

CO2 Pressure-Energy Recovery

- Application: CO2 pressure-energy recovery from a low-temperature methanol-wash process.
- Inlet: 31°C, 280 kPa(A), 126 t/h.
- Equipment: axial CO2 turbine expansion generator.
- Installed capacity: 1,500 kW.
- Process considerations: preheat CO2 with hot water, control exchanger pressure drop and meet downstream exhaust-temperature requirements.



ORIGINAL TECHNICAL REFERENCE VISUAL

Ammonia Turbine Demonstration

- Heat source: geothermal ammonia vapor.
- Medium characteristics: flammable, explosive and corrosive.
- Heat-source temperature: 56°C; pressure ratio: approximately 2.3.
- Equipment: two-stage high-speed integrated turbine generator.
- Installed capacity: 13 kW.
- Positioning: first-of-a-kind domestic research demonstration.

ORIGINAL TECHNICAL REFERENCE VISUAL

Wave-Energy Turbine Generator

- Heat source: oscillating ocean-wave energy.
- Equipment: newly developed low-pressure turbine expansion generator.
- Project details are confidential.

ORIGINAL TECHNICAL REFERENCE VISUAL

Magnetic-Bearing High-Temperature Heat Pump

- Wide-temperature-range heating with stable output up to 130°C.
- Large-capacity design with single-unit heating capacity up to 3.5 MW.
- Uses low-GWP and zero-ODP working-fluid options.
- Integrated system architecture for industrial hot-water and steam-generation applications.

型号	热源进口温度（℃）	热源出口温度（℃）	热水流量(t/h)	输入功率(kW)	制热量(kW)	制取温度(℃)	产汽量(t/h)	用电成本(万元/年)	产汽效益(万元/年)	净效益(万元/年)
BMHP-3500-900	90	85	453.7	897.0	3500	130	5	287.0	720	433.0
BMHP-3500-970		80	221.1	969.0				310.1		409.9
BMHP-3500-1050	80	75	431.1	1041.3				333.2		386.8
BMHP-3500-1120		70	209.7	1113.8				356.4		363.6
BMHP-3500-1335	60	55	384.7	1131.9				426.2		293.8
BMHP-3500-1410		50	186.4	1404.7				449.5		270.5
BMHP-3500-1650	40	35	337.7	1621.6				518.9		201.1
BMHP-3500-1700		30	163.0	1693.2				541.8		178.2

注：该机型工质为R1233zd(e)，电价0.4元/度，蒸汽价格180元/吨。

ORIGINAL TECHNICAL REFERENCE VISUAL

Economic results depend on site electricity price, steam value, source temperature and annual operating hours.

Magnetic-Bearing Air and Steam Compressors

- Magnetic-bearing air compressor: 40-150 m³/min, pressure up to 8 bar, oil-free compressed air and low-noise operation.
- Steam compressor: 1-220 t/h, outlet pressure 0.15-1.5 MPa, single-stage temperature rise up to 24°C.
- Steam-compressor stable flow range: approximately 50%-120% of design flow.
- Integrated skid-mounted and customized configurations support rapid deployment.

ORIGINAL TECHNICAL REFERENCE VISUAL

Start With an Energy-Recovery Assessment

Discuss an industrial energy-recovery opportunity

- Share the operating medium, composition, temperature, pressure, flow rate, annual operating hours and required outlet conditions.
- Boomtec will conduct an initial route screening for ORC, saturated-steam expansion or other applicable recovery technologies.

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